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The Use of Suicide Planes by the Japanese Army
and Navy Air Forces.

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I. INTRODUCTION

The single most effective weapon developed by the Japanese in the Pacific phase of World War II was the suicide plane, widely used by both the Japanese Army Air Force and the Japanese Naval Air Force during the final 10 climactic months. Suicide attacks by the two Japanese air forces fall into four periods:

1. Occasional accidental crashes and possibly a few premeditated crashes during the period from Pearl Harbor, 7 December 1941, until four days after the initial U.S. landings on Leyte in the Philippines, 19 October ~~1944~~ 1944.
2. During the Philippine Campaign beginning with the Battle for Leyte Gulf, 23-27 October 1944, and continuing until completion of the landings in Lingayen Gulf in January 1945.
3. During the Ryukyus Campaign beginning with the first carrier sweep of Kyushu, 18 March 1945, preliminary to landings in the Kerama Retto and on Okinawa proper, and continuing until the end of the Okinawa Campaign, 21 June 1945, less than eight weeks prior to the Japanese surrender.
4. Preparations for the final defense of the Japanese Homeland which began some weeks prior to the end of the Ryukyus Campaign. This phase was, of course, never completed.

All of the above attacks were aimed at Allied ships, both combat and non-combat types. In addition, beginning on 30 August 1944, a number of B-29s flying over Manchuria and Japan were deliberately rammed by Japanese Army aircraft but this tactic never became a ~~serious factor~~ *deterrent* to the 20th Air Force ^{operations}. There is no substantiated case of a suicide plane crash against a ground objective but during the Okinawa Campaign seven Japanese Army medium bombers transporting 12 suicide troops each attempted to crash-land at Yontan airfield on one occasion. Two planes made it, causing considerable damage. Similar operations were planned by the Japanese Naval Air Force which, by mid-July 1945, had assembled between 150 and 200 medium bombers and transports at northcentral Honshu airfields from which suicide troops were to be flown and crash-landed on B-29 fields in the Mariannas. Allied Task Force operations in the last month of the war prevented the mission from being attempted.

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II. THE KAMIKAZE STATE OF MIND

Although the idea of premeditated self-destruction on a military mission is foreign to the Occidental mind, it has long been well rooted in the Japanese way of thinking and the Japanese military tradition.

During the 1931 Japanese attack on Shanghai, China, the Japanese Army made much of the three soldiers who carried a bangalore torpedo through barbed wire and blew themselves up to effect a breach. A statue was erected in Tokyo to commemorate the event. During this war the Japanese Navy employed one-man suicide torpedoes, crash boats and midget submarines (first used at Pearl Harbor) offering little more than self-destruction to their crews. Army and Navy ground troops made numerous "banzai" or suicide charges throughout the war when their cause was hopeless or even before it became so. The Japanese felt their "main defense" against U.S. tanks in the Philippines was the "human bomb - men who carried specially designed bombs and hurled themselves" against the tanks.

While men and most items of Japanese ~~px~~ equipment were sufficiently plentiful that they could be expended in suicide missions without serious loss to overall striking power, there were not sufficient aircraft and trained pilots available to expend unless such a tactic became absolutely necessary. This point was not reached until the Allied invasion of the Philippines and even then the Army Air Force referred to it as a "temporary expedient" used "because we were incapable of combatting you by any other means for technological reasons."

The Japanese state of mind which brought about the planned use of suicide planes was compounded of several items: (i) realization after the loss of the Mariannas that Japan was facing a serious situation and that desperate measures were required to counter the anticipated Allied attack on the Inner Defense Zone, (ii) natural enthusiasm for a "cure all" new weapon based on inflated field reports of individual crashes, and (iii) the peculiar Japanese loyalty to their Emperor and, through him, to the military machine which allows them to commit suicide with the assurance of a place in the Japanese Valhalla - Yasukuni Shrine in Tokyo.

The interrogation of two leading Japanese air commanders

(B-29 bombing attacks)

gives a clue to this third factor:

(1) Lt. Gen. KAWABE, CG of the Army's Air General HQ:

"Everyone who participated in these attacks died happily in the conviction that he would win the final victory by his own death... The Japanese, to the very end, believed that by spiritual means they could fight on equal terms with you, yet by any other comparison it would not appear equal. We believed our spiritual conviction in victory would balance any scientific advantage and we had no intention of giving up the fight."

(11) Capt. INOUCHEI, Chief of Staff of the Navy's First Air Fleet in the Philippines Campaign:

"The center of Kamikaze is morale... (Just prior to the Allied landing in the Philippines) we felt as follows: we must give our lives to the Emperor and the Nation, that is our inborn feeling. I am afraid you cannot understand it well or you may call it desperate or foolish. We Japanese base our lives on obedience to Emperor and Nation. On the other hand, we wish for the best place in death, according to Bushido (Japanese code of feudal warriors). Kamikaze originates from these feelings... The trouble with the U.S. way of looking at it is if you start out on a mission with the idea of coming back, you won't proceed to carry out the mission with 100% efficiency."

To the western world "Kamikaze" -- literally "Divine Wind," an historical reference to the storm which destroyed the Mongol fleet invading Japan in the Middle Ages -- is synonymous with "suicide." But Gen. KAWABE had this to say:

"You call our Kamikaze attacks 'suicide' attacks. This is a misnomer and we felt very badly about your calling them 'suicide' attacks. They were in no sense 'suicide.' The pilot did not start out on his mission with the intention of committing suicide. He looked upon himself as a human bomb which would destroy a certain part of the enemy fleet for his country. They considered it a glorious thing while a 'suicide' may not be so glorious."

The term "Kamikaze" came to be used generally for all Japanese suicide crashes although strictly speaking it applied only to Japanese Navy planes and pilots. Both Japanese services used the phrase "special attack units" -- TOKUBETSU KOGEKI TAI, shortened to TOKKO TAI -- and this alone was the Army's designation. In this paper and in translations included here, however, the term "suicide" is used as synonymous with "Kamikaze" because it best fits the Allied view of Japanese Special Attack Units.

The voluminous testimony and evidence available makes it quite clear that thousands of Japan's most fit young men willingly volunteered for suicide aircraft missions and that stories of pilots having to be tied in their planes are not at all representative, if, indeed, a single such instance occurred. By the final weeks of the war, it is also clear, the

most eager pilots had either been killed off or were waiting their turn and the two Japanese ~~imperial~~ air forces had reached the stage of assigning new and poorly trained men to the suicide units - i.e., drafting "volunteers." One such "volunteer" who was saved by the surrender stated that he was "saddened to tears at receiving the death sentence" although "it is unmanly of me to say so."

But there was a general realization among all pilots in both services that they all were expected to die in the final battle against Allied invasion of the Japanese Homeland. It is apparent that there would have been only inconsequential deviations from this plan - this "obedience to Emperor and Nation."

Practically every Army and Navy air commander who could fly a plane - and some of the many who couldn't - has said since the surrender that he intended to die in the same "glorious way" in the final battle.

The sudden surrender - sudden and completely unexpected to the pilots and to the lower echelon commanders without exception - resulted in a major emotional crisis for the bulk of these men awaiting their turn to die gloriously. Yet not more than a dozen from the two services disobeyed orders and took off on unauthorized suicide missions - the attacks referred to by Admiral Halsey in his famous remark, "

."

Vice Adm. UGAKI, C-in-C of the Navy's Fifth Air Fleet, the major command in Kyushu at the end, has been reported to have flown off on a suicide mission to Okinawa when he heard, a few hours in advance, that the surrender was coming. Seven Army pilots are reported to have committed hara kiri at a forward base in Kyushu rather than face the disgrace of surrender if they could not carry out their suicide missions. Vice Adm. ONISHI, who had given the first general Kamikaze order to Naval pilots in the Philippine Campaign, committed suicide shortly after the surrender.

III. THE FIRST PHASE: from Pearl Harbor to the Battle for Leyte Gulf.

Japanese Army and Navy airmen do not agree as to the first instance of a Japanese plane crashing into an Allied vessel but the exact date and circumstances are not important. What is clear from the extensive testimony taken in Japan is that (i) the idea of using a plane as a form of guided missile occurred to numerous Japanese, both Army and Navy, both pilots and commanders, during this period, in conformity with the widespread state of mind supporting such an idea, (ii) several such crashes occurred during this period but they were isolated cases, they were on the pilots' own initiative if, indeed, they were premeditated, they were not encouraged by either Army or Navy commands and their effectiveness was not accurately known to the Japanese, (iii) Japan had not realized the desperation of her position in the war until the end of this period.

The following unconnected suicide crashes were credited by one or both of the Japanese air forces:

1. A ramming, considered accidental by the Japanese, of a Navy plane into the British battleship Prince of Wales, sunk off Malaya on December 1941.
2. Two pilots, "on their own initiative," crashed into an American carrier on 26 October 1942. The carrier Hornet was, in fact, hit by a burning plane but the Hornet's loss on that day was due to Japanese torpedo and dive bombing.
3. An Army fighter pilot rammed a ship near the Andaman Islands, variously reported as in April, June and August 1944. The Japanese credited him with sinking a British carrier but he probably hit a landing craft or barge. The same plane may have been the one which was reported by the British to have hit a hospital ship in the Maf River on the Burma-India frontier.
4. An Army plane reportedly dove on an Allied torpedo which the pilot saw heading for a convoy he was protecting in the Java Sea in May 1944.
5. An Army plane of the 5th Flying Regt crashed on an Allied ship at Biak, New Guinea, also in May 1944.
6. Admiral ARIMA, commander of the Navy 26th Air Flotilla, dove his plane into an Allied carrier on 15 October 1944. This attack was credited by the Navy with "lighting the fuse of the ardent wishes of his men" in the face of the approaching Philippine invasion by the Allies.

The Japanese high command, after the Mariannas Campaign, anticipating an Allied attack on their Inner Line of Defense, gave consideration as a counter measure to the suicide plane and its potentialities. The idea

was under discussion in the Navy after the disastrous loss of 1500 trained flying personnel in the Battle of the Philippine Sea in June 1944. Rear Adm. OHAYASHI, CO of the pilots of Carrier Division Three, reported to the C-in-C of the Japanese carrier fleet (the Third Fleet) that he wanted to organize suicide attacks and would like to command them personally. The matter was discussed in Tokyo with Admiral TOTODA, then C-in-C of the Combined Japanese Fleet - the highest naval command - but no decision was made. A few weeks later the two top air commanders in the Philippines, Lt. Gen. TOMINAGA, CG, Fourth Air Army, and Vice Adm. OHISHI, C-in-C, First Air Fleet, were considering the problem of how to sink Allied transports before they could land troops on beaches in the Philippines. Tests were made in Manila Bay during September, 1944, to determine the ~~maximum~~ probable number of hits by orthodox high level bombing on ships dead in the water, as they knew our transports would be. Results indicated to the Japanese that chances of hits ran about one in four.

Against this was set the theory that suicide missions would produce 100% hits but this 100% was strictly theory for no simulated suicide crashes were carried out as a part of these Manila Bay tests. ~~But~~ The commanders relied on the scattered field reports of random suicide crashes.

One Army officer explained the Army's part in the decision on the dual grounds that (i) the Japanese air forces were low in experienced pilots and (ii) "our fleet was so diminished that the Army Air Force had to do something about it." A Navy officer's explanation was that "all were beginning to think that there was no way but suicide to save the situation" - the "all" referring to "all combatants in the Philippine area."

The senior staff officer of the Army's Sixth Air Army in the Ryukyus Campaign listed the "four main reasons" for turning to the suicide tactic as follows:

1. There was no prospect of victory in the air by employment of orthodox methods.
2. Suicide attacks were more effective because ~~if~~ the power of impact of the plane was added to that of the bomb, besides which the exploding gasoline caused fires - further, achievement of the proper angle effected greater speed and ~~accuracy~~ accuracy than that of normal bombing.
3. Suicide attacks provided spiritual inspiration to the ground units and to the Japanese public at large.

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4. Suicide attack was the only sure and reliable type of attack at the time such attacks were made (as they had to be) with personnel whose training had been limited because of shortage of fuel.

At any rate, it is evident that both services agreed to inaugurate such a policy when the opportunity next presented itself - as it did with the arrival of the Allied transports and supporting fleet units off Leyte a few weeks later.

It is unthinkable that such a major decision on the employment of air power was made by field commanders without full concurrence of their superiors in the highest echelon, Imperial General Headquarters. But the Japanese made every effort to picture the Kamikaze spirit as welling up spontaneously from the pilots themselves without a suggestion from either the field commanders or Imperial GHQ.

"They may have been thinking about it at Imperial GHQ," the Japanese Naval Air Force Chief of Staff of the First Air Fleet in the Philippines said, ^{"but} ~~what~~ it was first put into practice in the Philippines."

That the Kamikaze spirit was there, waiting to be inflamed and exploited, is quite evident ~~ix~~ but the signal to begin had to be given by the field commanders with concurrence from Imperial GHQ. The propaganda exploitation of Kamikaze attacks from the beginning makes it evident that full plans ^① were made to drain the maximum effort and effect from this major tactical shift.

IV. THE SECOND PHASE: from the Battle for Leyte Gulf, 23-27 October 1944, through the landings at Lingayen Gulf in January 1945.

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The first American soldier went ashore on Leyte on the morning of October 20. Three days later the five day/^{naval} Battle for Leyte Gulf was joined. In the midst of this battle, probably on 25 October, the first planned Kamikaze mission - a Navy plane - came crashing into the midst of the fleet unit sitting off Leyte. The date of the first Army suicide mission has been variously reported as 24 October, 25 October and 6 November although the Army has generally agreed with the Navy's claim of initiating the suicide attacks. The idea, however, sprang from within both services and both were fully committed to its execution within a few days of each other.

The Kamikaze propaganda burst forth both on the Japanese air forces and the Japanese people, and, incidentally, on a puzzled public in the Allied world. Unquestionably the Japanese reports of amazing successes, of endless American battleships and carriers and transports being sunk in Leyte Gulf gave the Japanese air forces and the Japanese public a tremendous morale lift, something they both badly needed at the time.

The U.S. Navy fought swarms of attackers but took considerable losses, as shown in chart #1. U.S. land based aircraft had only a single field on Leyte - Tacloban - from which to operate in the first weeks of the operation and its task was primarily to provide support for the heavy ground operations.

Thus the carriers had to provide the cover air patrol (CAP) both for themselves and for other combat units and the transports and supply ships and landing craft. It was ~~an~~ an exhausting task to meet this new Japanese tactic but it was met both by planes and by the most terrific ships' anti-aircraft barrage yet seen on any sea.

Slowly, as the Americans advanced from Leyte to Mindoro to Luzon, the Japanese began to realize that Kamikaze was a delaying tactic at best. But at home in Japan the tales of Kamikaze filled the press, to which it was a complete success, and the same spirit was fired in the public at large. Kamikaze units were established in factories and on farms - not to die there but to work day and night with the same zeal as the pilots overseas. One factory distributed a gift towel to each of its workers bearing the

two characters for Kamikaze.

The suicide attacks during the Philippine Campaign fell into two main groups, (i) those against the Allied ships off Leyte until that island was secured after which only sporadic and lucky suicide missions got through to their targets, and (ii) those on the convoys en route north to Mindoro and Luzon, and during the Lingayen Gulf landings in Luzon. The bulk of the attacks were in the first period as the following table indicates:

Japanese Plane Losses in the Philippine Campaign

Month	Phase of Campaign	Total Losses		Of which these were suicide	
October	Leyte landing on 20th	800 Army †	Navy =	20 A †	N =
November	Leyte secured on ____	900 Army †	Navy =	150 A †	N =
December	Mindoro landing on ____	600 Army †	Navy =	100 A †	N =
January	Convoys attacked on ____ off San Jose, Mindoro, by 100 Army and 125 Navy planes. Japanese air forces neutralized by ____.	175 Army †	Navy =	120 A †	N =

Total for the Philippine Campaign: 2475 Army † Navy =
of which: 390 Army † Navy = were suicide
losses, or ____ % of all losses.

From an examination of the above table and of chart #1 (Results of Suicide Attacks on U.S. and other Allied Vessels during the Philippines Campaign), it is apparent that the ____ % of the two Japanese air forces expended on suicide missions paid off quite well in terms of damage though it failed in the major objective of turning back the Allied landings. The Japanese themselves knew little about the results; publicly they claimed practically 100% success but privately their guesses at the time ran from one hit - not necessarily a sinking - out of two down to one out of six or even less.

It has been estimated that in this campaign about one-third of all Japanese losses were planes shot down, one-third these destroyed on the ground and one-third for other reasons, chiefly non-combat accidents due largely to the poor condition of Japanese airfields.

It is also apparent from these figures that while the suicide tactic was achieving a measure of success for the Japanese, the

two air forces were still trying to continue part of their orthodox bomber and fighter activities. In the time the Ryukyus Campaign began, however, virtually all types of Navy planes and pilots went on suicide missions.

Both Army and Navy kept some of their best pilots from volunteering for suicide missions in the Philippines. But it was done on a tactical unit basis and standards of rejection were those of the local CO, usually because the pilots were wanted for torpedo or high level orthodox bombing. Pilots who did suicide definitely were a good cross section of those in the theater, both Army and Navy, in sharp contrast to the situation in the Ryukyus Campaign. Not until the Ryukyus Campaign, then, did the Japanese really go all out for Kamikaze; in that sense the use of suicide planes in the Philippines Campaign may be considered experimental. This is shown graphically by Chart #2 which makes clear the inroads of the suicide concept on the original orthodox pattern of the two Japanese air forces.

During the Philippine Campaign both the Army and Navy air forces drew pilots and planes from their regular tactical flying units. The first Navy pilots to be employed were members of the 201st Air Group (equipped with Zeke, then the Navy's standard first line single engine fighter). No Japanese Navy air unit, as such, was turned into a Kamikaze unit but, in fact, practically all the pilots of this and several other Navy air units were permitted to volunteer as Kamikaze pilots. Some 20 pilots of the 601st Air Group (a plane squadron of Carrier Division One) were sent to the Philippines to reinforce the 201st as new Kamikaze pilots. All were volunteers.

The Army drew volunteers from the various tactical units already in the Philippines - the 24th Flying Regt provided the first formal suicide pilot - and from those which were sent in as reinforcements. These volunteers formed into "Special Attack Units" and gave themselves unofficial symbolic names of the Kamikaze variety. The first was the Banda (" ") unit. The first to be formed in Japan and sent south was the Fugaku (" ") unit and about a dozen other likewise symbolic names were used. During November, 17 units such as the Fugaku, made up of volunteers from tactical units and from training instructors in Japan, were

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sent south, 14 to the Philippines (about 160 planes) and three to Formosa, as suicide units. All were expended.

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Very early in the Philippines Campaign both Japanese services began giving posthumous promotions for suicide attacks. At first a one rank promotion was given without regard to the type of ships attacked, though in October a Navy pilot credited with sinking an Allied carrier got a two grade promotion "because that was the main target at that time." But soon every pilot could go off to die confident of a two rank promotion. Unit leaders were specially honored by the Emperor.

Of the 17 Army units sent south about half flew fighters, the rest bombers. The fighters had 12 aircraft per unit and the bombers nine each. Navy units were formed from regular air groups in whatever number was desired for a particular sortie and there was no special naming or numbering system.

The two commands, in ordering suicide missions, merely directed that so many suicide planes go out and the lower echelons determined which planes and pilots were to be used from those available and which others would be used to provide cover. All the suicide aircraft used in the Philippines were combat types although some were obsolete and being used as trainers (i.e., the Army's KI-27, Kate). Regular trainers were not introduced until the Ryukyus Campaign (Navy only) and in preparations against the Kyushu landings (both Army and Navy). Both services used their best twin-engined bombers in the Philippines - the Army's Peggy and the Navy's Frances. Peggy was fitted out with extra bombs and a contact fuse projecting from the nose to open the bomb bay when the plane hit its target, thus affording a wider explosive area.

V. THE THIRD PHASE: During the Ryukyus Campaign

During the bloody days on Iwo Jima which fell between the Japanese defeat in the Philippines, ending in January 1945, and the landing of Allied troops on Okinawa, 1 April 1945, the two Japanese air services reviewed the use of suicide planes in the Philippines. They decided that (i) their employment was the most ~~most~~ successful tactic yet tried by either service, (ii) the Allies were likely to land next either in the Ryukyus or directly in Kyushu and the only possible way to stop them would be by concentrating the bulk of the two air forces, in terms of numbers, on suicide missions, (iii) with one important exception learned ^{that} from the Philippine experience, namely, a reasonable number of the regular fighter units must be withheld from suicide for ~~suicide~~ orthodox missions in order to provide the help necessary to get the suicide planes through the extensive Allied cover air patrol (CAP). Reconnaissance units likewise must be kept out of the suicide pool and for a while at least it would be worthwhile trying to use the remaining bomber units for orthodox missions before turning them into suicide units. But the basic problem was to get more suicide ~~more~~ planes into the air to saturate the Allied defenses in the hope that a good percentage would therefore get through. This, then, was the Japanese intention before the Ryukyus Campaign.

During the land campaign on Iwo Jima the Japanese were able ~~to~~ mount only two suicide plane attacks in support of their ground troops - one by the Navy, involving ___ planes and ~~and~~ one by the Army, involving _____. No ships were hit in either attack (?).

Shortly before the Ryukyus Campaign began, Japanese reconnaissance planes spotted an Allied concentration at Ulithi. The Naval Air Force made one long range suicide attack, using ___ twin-engine bombers (Frances) and succeeded in hitting one U.S. carrier, the Randolph.

Give date of Japanese landing
The first days of the Okinawa landing went surprisingly well, from the Allied standpoint, for ground resistance was absent and the air was clear of Japanese planes. Then Kamikaze hit with all its available fury on 6 April - 252 suicide planes plus nearly that many fighter sorties and reconnaissance missions - a total of at least 500 sorties, one of the two or three biggest attacks the Japanese were ever to stage on one day in this war.

Japanese Navy planes were ordered to concentrate on Allied warships while Army planes went after the transports. This was the first of nine major planned attacks against the Allied task force, transports and supply ships during the almost 12 weeks of the land campaign on Okinawa.

The Japanese doctrine was "to use as large a massed plane strength as possible" although "at times surprise attacks by small units were intentionally executed." And, as at Leyte, the Allies fought back with a massive anti-aircraft barrage from ship and shore plus a cover air patrol from the carriers. Again, the airstrips seized from the Japanese had to be used, for most of the campaign, in support of ground troops. Five (?) B-29 missions were flown from the distant Mariannas against the suicide fields on Kyushu and the Third Fleet twice (?) sortied to sweep the island. The Japanese dispersal was widespread, however, and the results were far from satisfactory in stopping the suicide attacks although maintenance and repair were hampered. Dispersal worked both ways, however.

Lt. Gen. SUGAWARA, CG of the Sixth Air Army, stated that the dispersal policy "required that a great deal more time be spent in preparing for a sortie. For example, if the take-off was to be in the early morning, it was necessary to begin assembling the planes the evening before, or at least from about the middle of the night."

The Japanese also harassed Okinawa from the south flank, staging some 250 Army and 50 Navy sorties from Formosa through the lower Ryukyus islands of Ishigaki and Miyake during this campaign. British carrier units were called on to work over all these southern fields in an effort to cut down the sorties from the south, and the Far East Air Force struck at the Formosa fields from the Philippines.

Both the Japanese air forces in Kyushu were under the tactical command of the Navy for the entire Ryukyus Campaign, a measure to "produce a more unified strategy," as Lt. Gen. SUGAWARA, the Army commander, put it, and in accordance with the general Japanese principle that the Army was responsible for the defense of Japan proper (except for the three chief naval bases at Yokosuka, Kure and Sasebo) while the Navy was responsible for repelling attack off-shore.

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While the Japanese Army Air Force on Kyushu was subordinate to the Supreme Commander, Combined Naval Forces, who issued overall tactical directives to the air forces operating against the Allies in the Ryukyus, Vice Adm. UGAKI, as C-in-C of the First Mobile Base Air Force (i.e., tactical title of the Fifth Air Fleet) was in tactical command of all Naval air units. The Third Air Fleet (a tactical command with HQ in the Tokyo plain area) and the ~~Third~~ ^{Tenth} Air Fleet (a training command also with HQ in the Tokyo plain area), the only two remaining air fleets in Japan, sent substantial reinforcements to Kyushu during the campaign. Although the C-in-C of the Third and Tenth Air Fleets were at Kanoya, south Kyushu, during part of the campaign, tactically these units in Kyushu were under command of the C-in-C, First Mobile Base Air Force.

General KAWABE, head of the Army's Air General Army, described the working of this joint command in these words:

"When they (the Navy command) made a decision as to how the campaign should be run, they informed the commander of the Army (the Sixth Air Army)...what the plan was and then left it up to him to set up his own organization for carrying out that plan...The command the Navy had over the Army consisted only in the selection of the target so that the Navy would say 'we are going to attack a certain target at a certain ~~time~~ time'...then it was entirely up to the Army...to coordinate with the Navy attack but the tactics involved were left entirely to the discretion of the Army commander."

Lt. Gen. SUGAWARA described the working arrangement in these words:

"We both received (operational) orders directly from Admiral TOYODA (Supreme Commander, Combined Naval Forces) in Tokyo... (These) instructions received from Tokyo were of a general type; but the actual details of operations were arranged by consultation between myself and Vice Adm. UGAKI and I followed his plans."

Gen. SUGAWARA said that while Vice Adm. UGAKI "set the dates," the "number of planes assigned to each day's operation from the Army had to be settled by myself in the light of the available number." The "main point of consultation," SUGAWARA said, "was ~~the~~ with regard to the air cover from Kyushu to Okinawa "as we were always short of planes, this topic required the greatest cooperation."

In this way the Navy ordered, and carried out with Army help, nine major attacks of which that of 6 April was the first. These attacks were given the cover name KIKESUI by the Japanese. The word literally means "chrysanthemum water" and the characters making up the word were used

in the crest of a 15th century Japanese hero who took the side of the Emperor in a prolonged civil war against heavy odds.

Figures from the various sources available differ as to the number of sorties in these attacks and therefore the following table is a reconciliation of the available figures, checked against Allied counts of Japanese planes at the time. It includes only the missions from Kyushu, those from Formosa being added to the total at the bottom of the table:

KIKUSUI ATTACKS

<u>Number and Date</u>	<u>Suicide Missions:</u>		
	<u>Navy + Army = Total</u>		
# 1 - 5 April	195	55	250
# 2 -			
# 3 -			
# 4 -			
# 5 -			
# 6 -			
# 7 -			
# 8 -			
# 9 -			
<hr/>			
Total:	1064	424	1489
Formosa based sorties:	50	250	300
Grand Totals:	1114	675	1789

From the first U.S. carrier strike on Kyushu, 18 March, nearly three weeks prior to the first Kikusui attack, in the periods between the nine attacks when the Japanese air forces were recuperating and preparing for the next major effort, and between the end of the Okinawa land campaign and the Japanese surrender (a period of 54 days), small groups of suicide planes - and even individual planes - attacked the Allied Fleet.

These attacks, together with the nine major efforts just tabulated, are shown graphically in Chart #3. This chart also shows the estimated "all other sorties" - fighter cover, reconnaissance, orthodox bombing - during the same period and it makes clear that after the initial effort the Japanese never were able to mount more than _____ suicide

sorties in one day. Every effort was made to get as many planes as possible off the ground in the nine main attacks.

Chart #4 gives the official U.S. Navy figures for the "Results of Japanese Army and Navy Air Force Suicide Attacks on U.S. and other Allied Vessels during the Ryukyus Campaign."

Chart #5 relates the damage during both the Philippine and Ryukyus Campaign to total suicide missions of the two Japanese Air Forces.

In this campaign the Japanese Navy, as in the Philippines Campaign, funneled its suicide planes and pilots through the normal air groups (*kokutai*) and set up no special suicide organization.

The Army, on the other hand, decided by the end of the Philippines Campaign that it would be easier, at least for bookkeeping purposes, to set up its suicide planes and pilots in a separate set of units ~~thru~~ though under the regular JAAF commands. This was done by establishing a numbered series of Special Attack Units.

The 17 units which had been formed in Japan and sent to the Philippines and Formosa during the Philippines Campaign were numbered, partly in retrospect, from one through 17 and those set up for the Ryukyus Campaign began with number 18. The numbers were assigned by the War Ministry rather than by the Air General Army and by the end of the Ryukyus Campaign they had reached into the 400s, though the series was not a solid one. From the evidence it appears that at least 200 units actually had been formed with pilots and planes assigned by the end of the campaign on 21 June 1945 although not more than 70 or 75 went on missions. The bulk of the units in this numbered series were being prepared against the Allied invasion and the series was continued until the end of the war.

Originally these Army units had 12 planes but by the end of the campaign practically all new units were being formed with only six planes, sometimes with an additional plane or even two in "reserve" to replace training and transport casualties. There were no replacements, however, for planes expended on suicide missions.

Before the end of the Ryukyus Campaign volunteering for

Kamikaze among Army pilots had fallen behind the need for suicide pilots, although Navy commanders continued to report that they had more volunteers pilots than planes.

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This Army selection of "volunteers" was "bad", stated Maj. Gen. MIYOSHI, commanding the bulk of the Army suicide units in South Kyushu at the end of the war. These suicide units conscripts came from both tactical and training units but the idea of ordering men into such units, MIYOSHI said, was not "in accord" with the basic principles of the Kamikaze spirit. There unquestionably was a falling off in pilot quality as the Ryukyus Campaign went on.

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Beginning near the end of the Philippine Campaign a special effort was made by both the Army and Navy air forces to give suicide pilots some special training for their jobs; this became increasingly necessary as more and more poorly trained pilots joined the suicide forces.

The shift from orthodox to suicide tactics was, in effect, largely a shift from a counter-air force air force (one that could meet the Allies in the air) to a counter-ship air force (one that aimed at sinking Allied ships and generally ignored Allied planes, however painful the result of the latter might be).

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"After the experience of the Philippine Campaign," said Col. MATSUMAE, a leading figure in the Army's air training at the time, "I stressed the fact that all planes, including fighters, bombers, etc., should be used for attacking ships rather than fly their particular roles...this does not necessarily mean that we did not (continue to) train fighter pilots but that we spent the first portion of the training program in training them to attack shipping and went into attack, interception, etc., in the later stages of the training program."

Navy pilots, of course, were taught from the first to attack shipping - both torpedo runs and dive bombing. As Kamikaze grew in Naval Air Force importance, so did dive bombing at the expense of torpedo attacks.

Both services worked up standard operating procedures for suicide attacks, elaborately laid out, in the Army case, in a regular field

manual. Both services, though acting independently, taught both high level approach (15,000 to 20,000 feet) and a minimum altitude approach over water although practically every conceivable altitude was, in fact, tried and tactics, as carried out, were extremely/~~fluid~~ with the only standardization of approach and altitude applying to particular types of aircraft. This appears to have been related to a study of the performance characteristics of particular types of planes.

Only the simplest visual navigation was necessary and at times the poorest trained/~~suicide~~ pilots were led to their targets visually by a twin-engine bomber. Suicide planes usually were not equipped with radio or other navigational aids and with the exception of a few pilots already proficient in navigation, relatively few flew night suicide missions and these were almost invariably on moonlight nights.

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Both services from the beginning picked out carriers as the most vulnerable Allied ships and the elevators and planes parked on the flight deck as the most vulnerable part of the carriers.

"We found that diving from astern and aiming for forward elevators reduced the efficiency of the target's evasive action," said Capt. INOBUCHI, Chief of Staff of the Navy's First Air Fleet in the Philippine Campaign.

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Targets on particular sorties "were designated as a result of study of reconnaissance photos," Col. MATSUMAE stated and varied from day to day according to the commanding officer's idea of what was currently most profitable.

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But telling the pilot what to hit and having him hit it were two different things. Destroyers turned out to be the most frequent targets and hundreds of planes dove on or at Allied landing craft and other small vessels. The Army's suicide manual made the point that pilot recognition of targets was a major problem in itself, even before meeting the problem of hitting the target once it was properly identified. Charts #1 and #4 make clear how poorly the Japanese pilots carried out instructions to hit major fleet units, combat, transport or supply, even when they successfully scored hits. Many pilots evidently found the screening force so hard to penetrate they were willing to settle for a hit on anything.

In addition to the need for providing special training instruction, bombs were a major problem, chiefly for the Army since the Navy had ~~xxx~~ long been familiar with dive bombing. The chief answer was for the Army ~~xxxxxxxxxxxx~~ to borrow from the Navy, using the Navy's 800-kg bomb on twin-engine aircraft and the twin-engine rescue planes. But the lighter single-engine aircraft had to try to adapt regular Army bombs.

When trainers were used by the Navy in the Ryukyus Campaign and when they were being prepared by the Army for the final defense of the Homeland, they carried loads of from 250 kg down to a mere 50 kg. To boost their crash effectiveness, additional gasoline was loaded and even hand grenades were sometimes piled about the pilot in the cockpit. Essentially all but the heavier Army and Navy planes were using bombs of insufficient caliber which accounted, in part, for the fact that no major Allied fleet unit (battleship, carrier, heavy cruiser or light cruiser) was ever sunk by a suicide plane and that the smaller ships sometimes survived several hits, one destroyer remaining afloat after five crashes.

During the Ryukyus Campaign many older aircraft, some obsolete and some obsolescent, were used though with the exception of one type of Navy trainer all were combat types at one time or another. This raised the additional difficulty of maintenance until the planes were ready for their final mission. Lt. Gen. SUGAWARA had this to say of the problem:

"The first difficulty...was...that the engines...were in poor condition and required a great deal of fixing up to make them effective. Secondly, because of the poor condition of the engines, the drawing of fuel from the extra tanks was often faulty and the planes were not able to fly the required distance..."

Maj. Gen. MIYOSHI pointed out that many of the Army's skilled maintenance personnel had been lost in the Southern Area and that there was a consequent slowing down of repair work. He added:

"We also lacked parts and that kept us from the use of older planes - the serviceability rate for special attack units was never more than 50% and generally 20% in Kyushu."

Gasoline shortages were the final complication. Lt. Gen.

SUGAWARA ~~said~~ said:

"The main trouble was that airfields such as Chiran (at the extreme southwest tip of Kyushu, a major Army suicide take-off base) could not be supplied as the railroads were bombed...Also, the quality of the gasoline began to deteriorate at the beginning of the Okinawa Campaign; planes equipped to use 92 octane gasoline had to be supplied with 87 octane gasoline...and

the quality went down steadily, shortening the planes' range and decreasing efficiency in general."

Alcohol, however, was not yet in use for operations when the Ryukyus Campaign ended though it was mixed with gasoline for what training there was. This was true of both Japanese air services which shared the gasoline shortage problem.

These increasing problems to the Japanese air forces plus completion of the American conquest of Okinawa on 21 June brought an end to all but a few sporadic suicide missions. The Japanese air forces thought the lull would last only until the Allied invasion of Kyushu and they set about getting ready for the final suicide plunge to save the Homeland.

Then suddenly at noon on 14 August 1945, Japan time, a scratchy voice came over the Japanese radio network. The Emperor said that Japan had decided to quit. They could hardly believe it. There would be no more suicide missions.

VI. THE FOURTH PHASE: Preparations for the Final Defense of the Japanese Homeland.

The Japanese Imperial General HQ estimated after the fall of Okinawa that "if Russia did not join the war, (the U.S.) would invade South Kyushu in October or November." The Joint Chiefs of Staff had, in fact, tentatively set 1 November 1945 for that operation.

The Japanese operational code name for the defense of the Kyushu-Shikoku area was KETSU, literally "Decisive"; the Allied cover name for the invasion of South Kyushu was OLYMPIC.

Japanese ground troops already were deployed for another last ditch fight when the war ended. Both the Army and Navy air forces were pouring their suicide strength into Kyushu and its approaches for a mass attack on our landing forces.

There is a question as to whether two-thirds, three-fourths or all of the Japanese air forces' strength would have been used in Kyushu or whether part would have been held back against an invasion of the Kanto Plain (on which lie Tokyo and Yokohama) in the spring of 1946. The question appears not to have been fully answered in the minds of the Japanese commanders, either Army or Navy, when the surrender came and probably would have been dictated pragmatically by the relative success of those Japanese suicide planes which definitely would have been thrown against the Allies in Kyushu.

The following excerpts from interrogations give the general Japanese plan for the use of airpower in the KETSU operation to counter our OLYMPIC plans:

Lt. Gen. TAZOE, Chief of Staff, Air General Army, and Col. MIYASHI, chief of operations:

"The (Army) air force plan was to attack the Allied fleet with Kamikaze planes and for that purpose the full air force led by the commanding general was made ready to destroy the Allied ships near the shore. We expected annihilation of our entire air force but we felt that it was our duty..."

"We thought we could win the war by using Kamikaze planes on the ships offshore; the ground forces would handle those who got through. The Army could not put up effective resistance without the air arm but we intended doing the best we could, even if we perished... (The entire Navy and Army air forces) volunteered (for Kamikaze)..."

Gen. KAWABE, Commanding General, Air General Army:

"We did not have any power (to attack), we could only defend the home islands. We expected that this (special attack) defense would bring us to the point where we could win the war...

"We were preparing to use all our planes for Kamikaze but the special attack (force) had units of its own. The regular fighters and bombers also were in separate units and we expected to use them for special attack as the last resort."

Lt. Col. HANATANI, Air General Army:

"The fighters which flew cover for the suicide units were to fly conventionally until all suicide aircraft had been used, then they were to become suicide pilots themselves."

And again, Gen. KAWABE:

"...our strategy was aimed solely at the destruction of your fleet and transport fleet when it landed here in Japan...We believed that, despite your destruction of our major fields, we could very easily construct fields from which Kamikaze planes could take off. Everywhere we had built little fields capable of launching Kamikaze planes. As long as there was only a question of launching them and not of getting them back, there was no question about that. We knew you would do everything in your power to destroy all our airfields but we believed the airfields necessary for launching Kamikaze planes were such simple affairs that they could be mended very quickly. We believed that by taking advantage of weather, heavy overcast, intervals between your bombing raids, we could repair the airfields enough to keep them serviceable. Also we could use stretches of beach along the coast."

There will, of course, never be an ~~xxx~~ answer to this last question of how thoroughly the Allied air forces could have kept the Kamikaze planes out of the air or at least away from the beachheads and off-shore fleet units. The U.S. Far East Air Force, the U.S. Strategic Air Force and the U.S. Navy's carrierbased airforce were laying out the biggest neutralization and cover plans of the entire Pacific War.

The question of how many Japanese planes would have been ready to take off when the Allied troops hit the South Kyushu beaches on D-Day is very difficult to determine. Japanese figures do not agree, even within each of the two air forces, because on surrender day both air forces were in a state of flux which left statistical/work far behind field movements. Reports from Korea, Manchuria, China and Formosa, from which every last possible plane was to be drawn, were weeks behind. Finally, what records there were the Japanese have stated they burned.

In Japan serviceability differed greatly depending on the extent of Allied air sweeps, the change over of many suicide trainers to the use of alcohol and the extent of airfield maintenance.

Local gasoline shortages at the key fields closest to the landing beaches were becoming acute due to the blocking of Japanese railroads

by Allied air power although the all-out Allied attack on transportation facilities had not yet begun. And further back in the line of supply the manufacture of aircraft and parts were in a state of disruption because of B-29 and carrier based air strikes and the dispersal program forced upon these factories still standing.

With all these uncertainties in mind, then, an estimate of the strength of the two air forces as of 1 November 1945, OLYMPIC Operation's D-Day, is shown below. With it is a similar estimate, somewhat more certain, for Surrender Day, 14 August 1945.

The estimate of the Japanese air potential in OLYMPIC Operation includes everything the two services had left on Surrender Day and it presumes that the entire Army and Navy air forces would have been thrown at ~~xx~~ the Allies during this operation although, of course, not on D-Day itself. No attempt is made to estimate a Japanese potential by the time of CORONET Operation because of the foregoing assumption that the two air forces would have been expended in defense against OLYMPIC Operation.

Estimate of Japanese Army and Navy Air Strength

Date	Air Force	All Planes	Planes Considered Ready for Suicide	% Ready for Suicide
14 Aug 45	Army:			
	combat types	_____		
(END OF THE WAR)	trng types	_____		
	misc. types	_____		
	Total	_____	_____	
	Navy:			
	Combat types	_____		
	Trng types	_____		
	Misc types	_____		
	Total	_____	_____	5
1 Nov 45	Army:			
(OLYMPIC OPERATION)	combat types	_____		
	trng types	_____		
	misc types	_____		
	total	_____	_____	
	Navy:			
	combat types	_____		
	trng types	_____		
	misc types	_____		
	total	_____	_____	100

NOTE: The above tables include all Japanese aircraft in Japan proper and outlying islands, Korea, Manchuria, China and Formosa. They do not include those in the Southern Area, interdicted by the Allies prior to the end of the war.

The deployment of these Japanese aircraft is shown on the map titled Chart #6, as the Japanese planned for 1 November 1945. This deployment is based on maps and other information furnished by the two Japanese air forces. To complete this approximate picture of what the Allies might have faced in OLYMPIC Operation, the Japanese Army ground and certain Navy ground force dispositions in Kyushu alone have been plotted in terms of numbers of troops. In the case of the ground troops, deployment in Kyushu was virtually completed when the war ended although some Army divisions had as little as 20% of their table of equipment provided in weapons. The Japanese did not expect to be able to move any additional troops to Kyushu subsequent to 15 August 1945.

The Japanese command set-up for KETSU was to be different from that during the Ryukyus Campaign when the Sixth Air Army (Kyushu) operated tactically under Navy command. The Air General Army, top Army air command, assumed direct control of the Sixth Air Army, still the chief of JAAF tactical organization. Army-Navy cooperation was to be both on

the highest level at Imperial General HQ in Tokyo and between the Sixth Air Army and the Fifth Air Fleet (Kyushu) where "preparations were made to strengthen the communications network, to establish joint forward command posts and to exchange influential staff members."

The general Japanese concept of defense was still that the Army defended the homeland and the Navy repelled invasion off-shore but here both services would have to throw all their weight at the shore-line invasion. At the time the Ryukyu Campaign was beginning the Air General Army was just set up. By the war's end it was in a position to "facilitate and quicken" the redeployment of Army air units within Japan and Korea where it had unquestioned central authority and to draw help from China, Formosa and Manchuria.

The Army and Navy air forces both intended to mass the bulk of their strength, particularly suicide planes, at Kyushu, Shikoku and Western Honshu bases before the Allied landing, dispersing them on small grass fields of which many new ones were being or already had been prepared at the time of surrender and in underground "hangers," most of which merely were caves in hillsides. The first line of reinforcements would come from central Honshu and Korea with the second and final reinforcements coming in from the continent and from eastern and northern Japan, as shown on chart #6.

Both air forces considered their plans as purely offensive. One senior Army operations officer put the defensive aspect this way:

"Since most urban areas had been burned by the time the war was terminated, there was practically nothing to be defended aerially and air defense operations accordingly ceased as such and the effort became purely offensive."

Maj. Gen. MIYOSHI, who was in charge of the Army suicide units in South Kyushu, stated that "we never thought of defense" and that no attempt was made in the last weeks of the war to defend Japanese airfields in Kyushu ~~hazards~~ with fighters because "we would have lost too many planes -- we depended on AA."

~~Each~~ Both air forces gathered together every type of plane it could find, no matter how obsolete or how long in ~~weather~~ storage. The

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problem was, first of all, to get together enough planes to achieve that necessary saturation of Allied defenses which had never quite been done in either the Philippines or the Ryukyus Campaign. The Army visualized waves of 300 to 400 planes at the rate of "one wave per hour for each the Army and Navy," a highly optimistic picture to say the least. In the Army's case, all of these odds and ends of aircraft had to be modified as suicide planes if, indeed, they could be gotten into operational condition for even that single mission and then deployed until the day of use.

The Naval Air Force was considerably further along in its preparations. Navy trainers were in fairly good condition by 15 August and since almost all were already in dispersal deployment, they required little maintenance. By 1 November they would have constituted a considerable potential threat which would have been most difficult for the Allied air forces to destroy until the moment they were rolled out of hiding.

The bulk of orthodox advanced training in both services had come to a standstill by mid-1945. Some primary training continued but these pilots were destined for Kamikaze.

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The Air General Army was planning to organize 3000 training planes and their pilots into 500 special attack units of six planes each for KETSU but only a small portion of these had been organized when the war ended. Some of them were included in the 385 units which existed at the end, units including both combat and trainer types.

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The pilot situation at the end of the war, for the Army, showed a total of 8800 available, including general officers. Of these 2000 were trained for nothing but Kamikaze, 5000 were in tactical and other units and, of course, had had more than enough training and experience to become Kamikaze pilots, 1000 were in training groups and schools, including instructors and assistant instructors, and most of them also were capable of suicide attacks.

The 2000 pilots trained only for suicide "were trained only as far as primary training for diving and no more." The minimum flying time for Army pilots who were being transferred to suicide units from the training units as the war ended was ^{70 hours?} 70 but it is likely that many pilots would have been turned over to suicide units with considerably less flying time

if the war had gone on until 1 November.

Of about 10,000 Navy pilots at the end of the war, 1700 were listed as capable of day and night missions, 1750 were capable of missions by dawn and dusk as well, 2850 were capable only of day missions and 3100 required further training before they were capable of anything. The maximum hours of flying time for the first group was 100, and in the last group, of whom a large number were specifically listed for Kamikaze, the number of training hours varied from 30 to 50. Except for maintenance and a little basic training, all training in progress at the war's end was devoted to preparing the less experienced pilots for Kamikaze; that training consisted mainly of dive-bombing, with some night flying and night bombing.

What special attack training went on in the forward areas was sandwiched in between Allied fighter sweeps of the fields, usually at dawn or dusk or on moonlight nights when the novice pilots could navigate without instruments or could follow a lead plane visually.

The Navy air force likewise planned, according to Capt. INOUCUCHI, to fly Kamikaze missions "primarily at twilight," using the two most plentiful Navy trainers (SHIRAGIRU and WILLOW), one a monoplane and the other a biplane). The Navy, the captain stated, probably would not need pathfinder planes for these missions. The "plan was to wait until the very last moment," Capt. INOUCUCHI said, "until the American forces were dispersed as little as possible and thus inflict a greater amount of damage."

Lt. Col. HAMATANI stated that while the more experienced Army pilots in the combat fighters could fly as far as 400 miles out to sea for suicide missions, the less experienced pilots were much more likely to achieve success if they waited until the Allied ships were lying "directly off-shore."

This same hope was expressed by Lt. Gen. SUGAWARA in these words:

"Due to the fact that the field of fighting would not be 500 or 700 kilometers distant (as it was in the Ryukyus Campaign), and that the Japanese pilots would be at the point of combat anywhere along the coast, I feel that if preparations had gone according to our plans, it would ~~not~~ have been possible for us to defeat the Allied attempt to land on our shores."

This point of view, of course, does not take into account the plans of the Allied land and carrier based air forces to deny the air

to the Japanese for these 600 or 700 kilometers, or even more, behind the landing beaches and in effect to make the "field of fighting" even more distant and difficult to reach than it was during the Ryukyus Campaign.

Capt. INOUCHE, in estimating in retrospect the hits the Navy expected by Kamikaze attacks, stated that he thought the results would be ~~xx~~ "only one-ninth or one-tenth" successful while others were as hopeful as one-sixth.

Bombs were still a problem when the war ended but the only attempt to solve it was the planning of a one-ten suicide bomb, called the MIDAITO (literally " "), at the Army's Osaka Air Depot. But not more than three had been built when the war ended and the great increase in the number of light planes introduced for suicide missions meant that very few planes could have carried the new bomb even if it had been manufactured and transported to forward fields.

Every trainer to be used for Kamikaze had to have a bomb rack installed beneath the fuselage and extra fuel tanks added; usually some sort of release was provided for the bombs for if the pilot could drop his bomb an instant before striking his target the penetrating power was greatly increased. Conversion of seaplanes for the Navy was found to be "difficult" also.

Both maintenance and gasoline would unquestionably have affected the Japanese suicide plans, especially after the initial suicide attacks, both in Kyushu and the Kanto Plain. The use of alcohol further complicated the maintenance problem, again chiefly on the obsolete and training types of aircraft assigned to suicide missions.

All these factors, as ~~has~~ has been stated, make difficult any estimate of Japanese capabilities to oppose OLYMPIC Operation on 1 November 1945. But they do not remove the unquestionable fact that the two Japanese air forces would have had, the day the Allied landed, sufficient planes, pilots, fuel and serviceable airfields plus a fanatical Kamikaze spirit among the bulk of officers and men, pilots and ground personnel, to have made the cost of OLYMPIC Operation extremely ^{high?} ~~costly~~ in terms of both Allied men and material.

Results of Japanese Army and Navy Air Force Suicide Attacks on U.S. and
other Allied Vessels during the Philippines Campaign.

Type <u>Ship</u>	Hits on <u>Ships</u>	Near Misses Damaging <u>Ships</u>	Ships Hit <u>Hit</u>	Ships Damaged by Near Misses Only <u>Near Misses Only</u>	Ships Sunk <u>Sunk</u>
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(NOTE: these figures are available from
the U.S. Navy in Washington)

Totals:

Note: During this campaign losses from all causes other than
suicide attacks were:

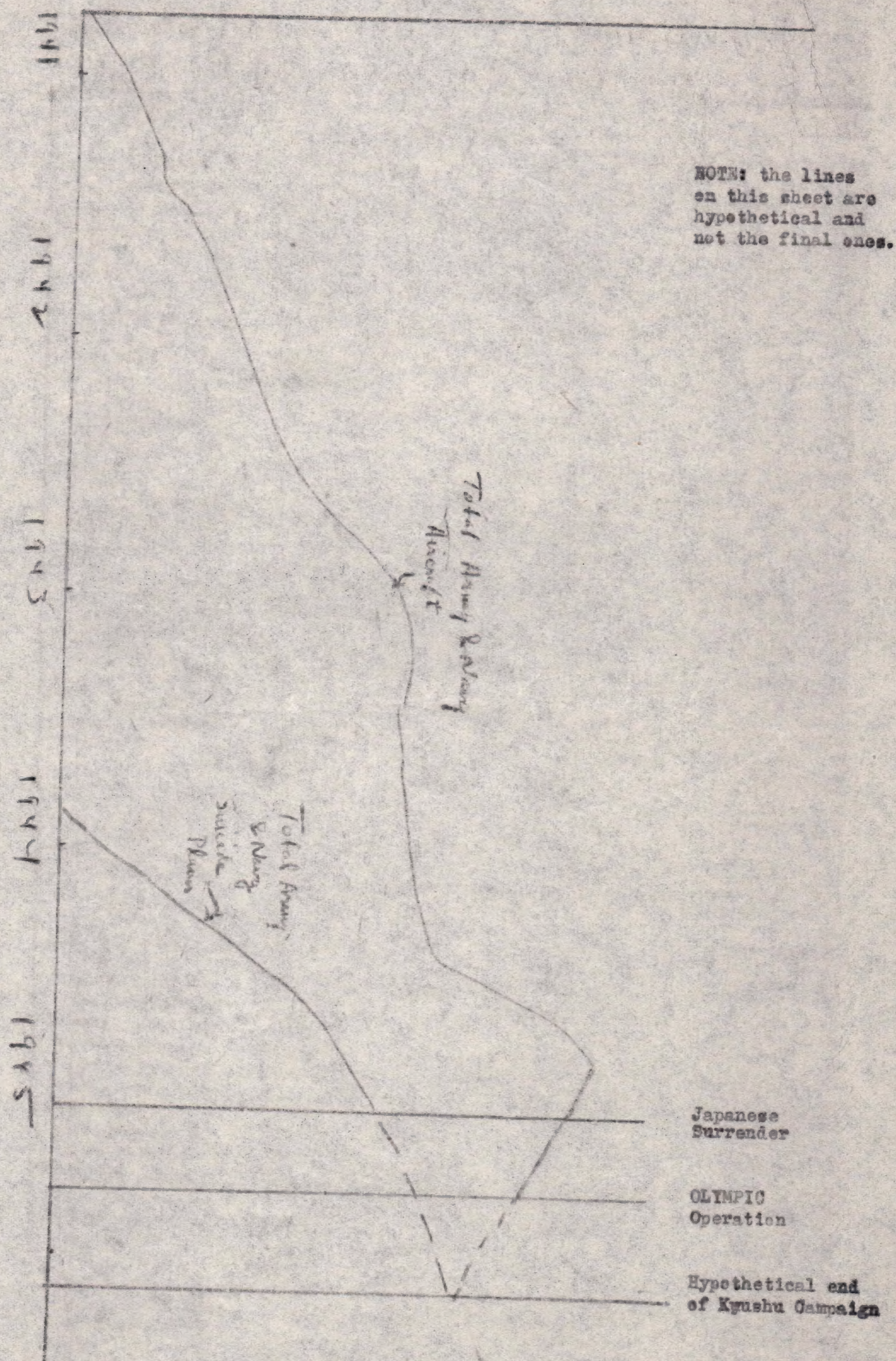
Type <u>Ship</u>	Hits on <u>Ships</u>	Near Misses Damaging <u>Ships</u>	Ships Hit <u>Hit</u>	Ships Damaged by Near Misses Only <u>Near Misses Only</u>	Ships Sunk <u>Sunk</u>
---------------------	----------------------------	---	----------------------------	--	------------------------------

Totals:

Grand
totals:

% of grand
total due
to suicide
attacks:

Chart #2



ALL
SORTIES

250 -

18
MARCH
#5

6
APRIL
KIKUSU #1

#2

#3

#4

#5

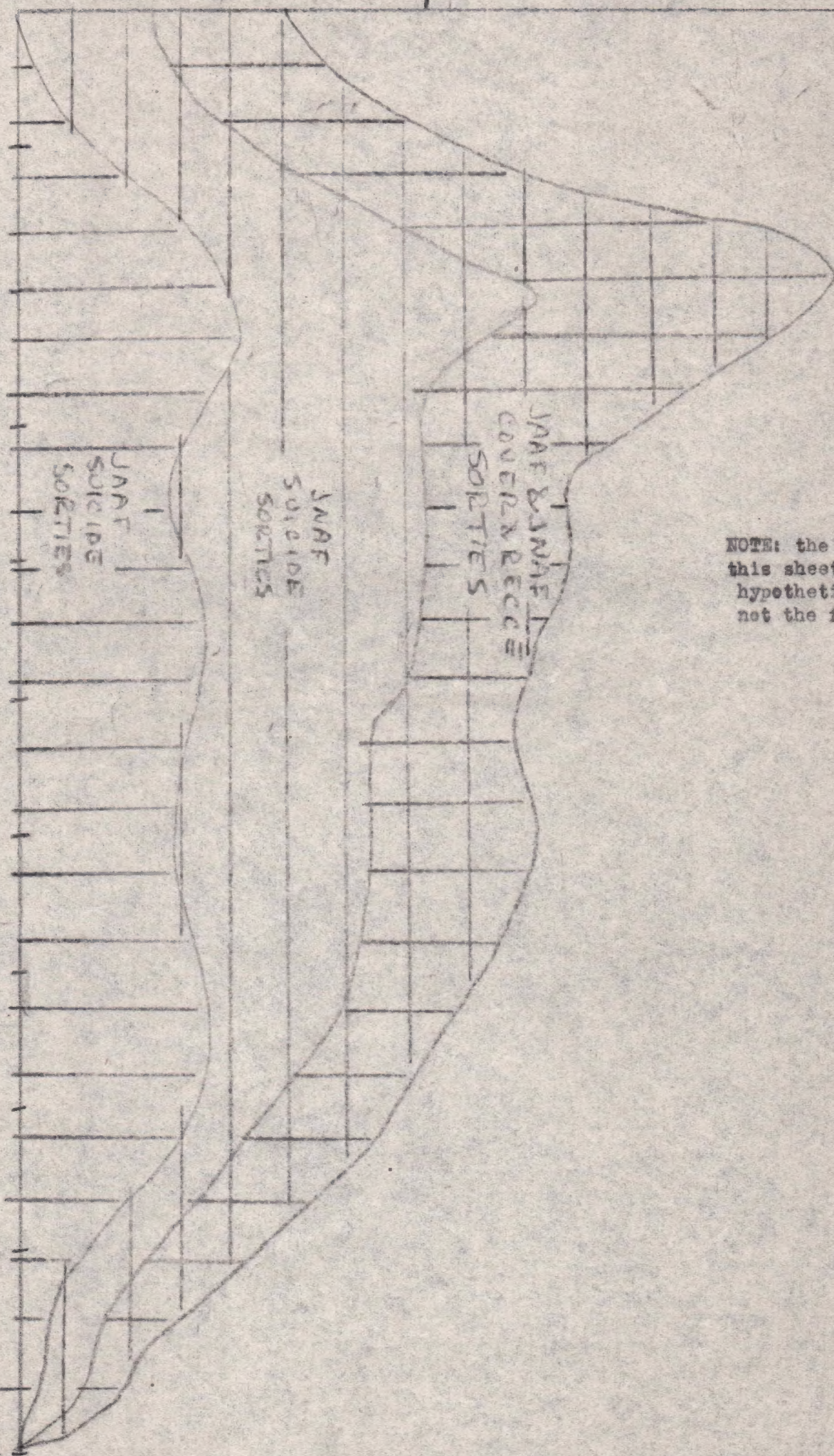
#6

#7

#8

#9

14
AUG.
SUAREZ



NOTE: the lines on
this sheet are
hypothetical and
not the final ones.

Chart #4

Results of Japanese Army and Navy Air Force Suicide Attacks on U.S. and
other Allied Vessels during the Ryukyus Campaign

Type Ship	Hits on Ships	Near Misses Damaging Ships	Ships Hit	Ships Damaged by Near Misses Only	Ships Sunk
--------------	---------------------	----------------------------------	--------------	---	---------------

(Note: these figures are available from
the U.S. Navy in Washington)

Totals:

Note: During this campaign losses from all ~~other~~ causes other than
suicide attacks were:

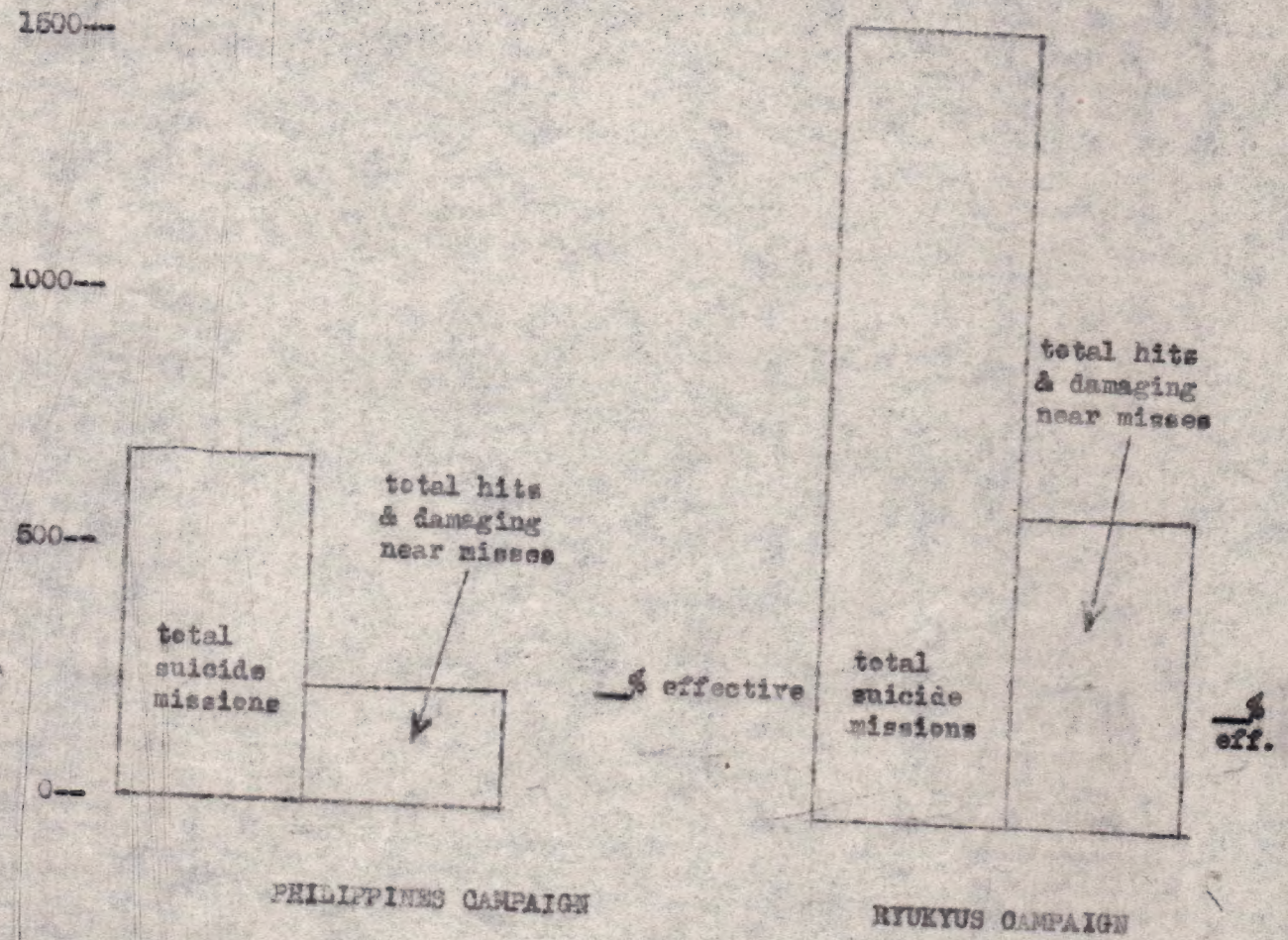
Type Ship	Hits on Ships	Near Misses Damaging Ships	Ships Hit	Ships Damaged by Near Misses Only	Ships Sunk
--------------	---------------------	----------------------------------	--------------	---	---------------

Totals:

Grand
totals:

% of grand
total due
to suicide
attacks:

Chart #5



Note: the figures given here are hypothetical and not the final ones.